



**Air Quality
TIER II OPERATING PERMIT
and
PERMIT TO CONSTRUCT**

**State of Idaho
Department of Environmental Quality**

PERMIT No.: T2-030317

FACILITY ID No.: 005-00029

AQCR: 061

CLASS: SM-80

SIC: 8221

ZONE: 12

UTM COORDINATE (km): 383, 4746

1. PERMITTEE

Idaho State University, Physical Plant

2. PROJECT

Tier II Operating Permit Renewal

3. MAILING ADDRESS

749 E. Humbolt, Building No. 18

CITY

Pocatello

STATE

ID

ZIP

83209

4. FACILITY CONTACT

Darrell Buffaloe

TITLE

Director, Physical Plant

TELEPHONE

(208) 282-2209

5. RESPONSIBLE OFFICIAL

Darrell Buffaloe

TITLE

Director, Physical Plant

TELEPHONE

(208) 282-2209

6. EXACT PLANT LOCATION

749 E. Humbolt, Building No. 18

COUNTY

Bannock

7. GENERAL NATURE OF BUSINESS & KINDS OF PRODUCTS

University

8. PERMIT AUTHORITY

This permit is issued according to the *Rules for the Control of Air Pollution in Idaho*, IDAPA 58.01.01.400, and pertains only to emissions of air contaminants regulated by the state of Idaho and to the sources specifically allowed to be operated by this permit.

Only the terms and conditions pertaining to Tier II operating permit requirements are subject to the expiration date of this permit.

The permit to construct conditions in this permit will expire if construction has not begun within two years of its issue date or if construction is suspended for one year.

This permit has been granted on the basis of design information presented in the application and the Idaho Department of Environmental Quality's (DEQ) technical analysis of the supplied information. Changes in design or equipment that result in any change in the nature or amount of emissions may be considered a modification. Modifications are subject to DEQ review in accordance with Section 58.01.01.200 of the Rules for the Control of Air Pollution in Idaho.

TONI HARDESTY, DIRECTOR

DEPARTMENT OF ENVIRONMENTAL QUALITY

DATE ISSUED: Proposed for Public
Comment

DATE EXPIRES:

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Acronyms, Units, and Chemical Nomenclatures

| | |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| AQCR | Air Quality Control Region |
| CFR | Code of Federal Regulations |
| CO | carbon monoxide |
| DEQ | Department of Environmental Quality |
| EPA | U.S. Environmental Protection Agency |
| gr/dscf | grains (1 lb = 7,000 grains) per dry standard cubic foot |
| IDAPA | a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act |
| km | kilometer |
| lb/hr | pound per hour |
| MMBtu/hr | million British thermal units per hour |
| NAAQS | National Ambient Air Quality Standards |
| NO _x | nitrogen oxides |
| O&M | Operation and Maintenance |
| PM | particulate matter |
| PM ₁₀ | particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers |
| PTC | permit to construct |
| SIC | Standard Industrial Classification |
| SM | synthetic minor |
| SM-80 | synthetic minor with emissions of 80% or more of the major source threshold value |
| SO ₂ | sulfur dioxide |
| T/yr | tons per year |
| UTM | Universal Transverse Mercator |

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1. TIER II OPERATING PERMIT SCOPE

Purpose

1.1 The purpose of this Tier II operating permit and permit to construct is to:

- Renew the existing Tier II operating permit
- Incorporate PTC No. P-050306, issued November 1, 2005, for Boiler No. 4
- Incorporate PTC No. P-020328, issued January 13, 2004, for a pathological waste incinerator
- Permit a baghouse on Boiler No. 2
- Write permit limits for Boilers No. 1 and No. 3 to limit operation as a part of facility-wide NAAQS compliance demonstration
- Add permit condition to prohibit coal usage in Boiler No. 2 during an air pollution episode

1.2 The following permit replaces the following permits, the terms and conditions of which no longer apply:

- PTC No. P-050306, issued November 1, 2005
- PTC No. P-020328, issued January 13, 2004
- PTC No. 005-00029, issued November 16, 1999 for an ash barrel
- Tier II Operating Permit No. 005-00029, issued June 6, 1997

Regulated Sources

1.3 Table 1.1 lists all sources of regulated emissions in this permit.

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Table 1.1 SUMMARY OF REGULATED SOURCES

| Permit Section | Source Description | Emissions Control(s) |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 3 | <u>Boiler No. 2</u> Manufacturer: Babcock & Wilcox Co. Model: H-1329 Burner type: Dry bottom Rating: 23 MMBtu/hr Fuel type: Coal | <u>Baghouse</u> Manufacturer: Staclean Diffuser Co. Efficiency: 99.9% for PM & PM ₁₀ |
| 4 | <u>Incinerator</u> Manufacturer: National Incinerator Model: 2H46M Incinerator type: Dual chamber Burner type: Axial firing Waste retention time: 60 minutes Rated heating capacity: 1.6 MMBtu/hr Max. hourly combustion rate: 0.8 MMBtu/hr Fuel type: Natural gas | None |
| 5 | <u>Boiler No. 1</u> (Backup or standby boiler) Manufacturer: Babcock & Wilcox Co. Model: H-1329 Burner type: Horizontally fired Rating: 32.05 MMBtu/hr Fuel type: Natural gas | None |
| 5 | <u>Boiler No. 3</u> Manufacturer: Superior Model: Not available Burner type: Horizontally fired Rating: 26.92 MMBtu/hr Fuel type: Natural gas | None |
| 6 | <u>Boiler No. 4</u> Manufacturer: Keystone Model: Victory Rating: 60,000 lb steam/hr - 72.84 MMBtu/hr Fuel type: Natural gas | Coen low-NO _x burner |

Other Sources

- 1.4 Table 1.2 identifies all other air pollution emitting sources at the facility that do not require specific permit conditions to demonstrate compliance with applicable air quality standards.

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Table 1.2 OTHER AIR POLLUTION SOURCES AT THE FACILITY.

| Source Description | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <u>Boiler B8</u> Manufacturer: Monitor Model: M723-40 Rating: 1.674 MMBtu/hr Fuel type: Natural gas | <u>Boiler B9</u> Manufacturer: Cleaver Brooks Model: CB 80 HP Rating: 2.678 MMBtu/hr Fuel type: Natural gas | <u>Boiler B10</u> Manufacturer: Monitor Model: M723-60 Rating: 2.511 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B11</u> Manufacturer: Pacific National Model: PS-60GS Rating: 2.677 MMBtu/hr Fuel type: Natural gas | <u>Boiler B12</u> Manufacturer: Sellers Model: 77 Commodore Rating: 3.348 MMBtu/hr Fuel type: Natural gas | <u>Boiler B13</u> Manufacturer: National BD Model: H2-2100A-CEBRCAG Rating: 2.1 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B14</u> Manufacturer: Laars Model: LC-2871 Rating: 2.87 MMBtu/hr Fuel type: Natural gas | <u>Boiler B15</u> Manufacturer: National Model: 10-66 Rating: 2.25 MMBtu/hr Fuel type: Natural gas | <u>Boiler B16</u> Manufacturer: Smith Model: N95-1075 Rating: 3.844 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B17</u> Manufacturer: Weil McLain Model: LGB series 1 Rating: 1.3 MMBtu/hr Fuel type: Natural gas | <u>Boiler B18</u> Manufacturer: Weil McLain Model: MGB-8 Rating: 1.19 MMBtu/hr Fuel type: Natural gas | <u>Boiler B19</u> Manufacturer: Not available Model: Not available Rating: 0.299 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B20</u> Manufacturer: Not available Model: 211-20-WT-1 Rating: 3.0 MMBtu/hr Fuel type: Natural gas | <u>Boiler B21</u> Manufacturer: HydroTherm Model: AM300 Rating: 0.299 MMBtu/hr Fuel type: Natural gas | <u>Boiler B22</u> Manufacturer: Raypak Model: Not available Rating: 0.726 MMBtu/hr Fuel type: Natural gas |
| <u>Kiln K23</u> Rating: 0.0028 MMBtu/hr Fuel type: Natural gas | <u>Kiln K24</u> Rating: 0.1 MMBtu/hr Fuel type: Natural gas | <u>Burnoff Furnace F25</u> Manufacturer: Johnson burner Rating: 0.2 MMBtu/hr Fuel type: Natural gas |
| <u>Melting Furnace F26</u> Manufacturer: Pyramid burner Rating: 0.1 MMBtu/hr Fuel type: Natural gas | <u>Boiler B27</u> Manufacturer: Crane Model: 66A series Rating: 1.75 MMBtu/hr Fuel type: Natural gas | <u>Boiler B28</u> Manufacturer: Crane Model: Sunnydale 302 Rating: 0.525 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B29</u> Manufacturer: Laars Model: NB33854 Rating: 0.5 MMBtu/hr Fuel type: Natural gas | <u>Boiler B30</u> Manufacturer: Laars Model: NB 33978 Rating: 0.5 MMBtu/hr Fuel type: Natural gas | <u>Boiler B31</u> Manufacturer: A. O. Smith Model: TW225V-942 Rating: 0.225 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B32</u> Manufacturer: A. O. Smith Model: BT365A BBO Rating: 0.365 MMBtu/hr Fuel type: Natural gas | <u>Boiler B33</u> Manufacturer: Lochinvar Corp. Model: CHN2070 Rating: 20.7 MMBtu/hr Fuel type: Natural gas | <u>Boiler B34</u> Manufacturer: Lochinvar Corp. Model: CFN0990PM Rating: 0.832 MMBtu/hr Fuel type: Natural gas |
| <u>Boiler B35</u> Manufacturer: A. O. Smith Model: BTC197970/BTC275973 Rating: 0.275 MMBtu/hr Fuel type: Natural gas | <u>Emergency Generator No. 1</u> Manufacturer: Intermountain Power Model: Generac 2000 Burner type: Not available Rating: 0.539 MMBtu/hr Fuel type: Natural gas | <u>Emergency Generator No. 2</u> Manufacturer: Spectrum Model: 400DS60 Burner type: Not available Rating: 1.38 MMBtu/hr Fuel type: No. 1 or No. 2 fuel oil |
| <u>Emergency Generator No. 3</u> Manufacturer: Generac Power System Model: Generac6.8GN Burner type: Not available Rating: 0.884 MMBtu/hr Fuel type: Natural gas | <u>Emergency Generator No. 4</u> Manufacturer: Kohler Model: 60REOZJB Burner type: Not available Rating: 4.154 MMBtu/hr Fuel type: No. 1 or No. 2 fuel oil | <u>Art Department Ash Barrel</u> Burns wood chips and paper Burns less than 100 lb/hr and 1,000 lb/yr Located 100 meters from property line |

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2. FACILITY-WIDE CONDITIONS

Fugitive Emissions

- 2.1 All reasonable precautions shall be taken to prevent PM from becoming airborne in accordance with IDAPA 58.01.01.650-651. In determining what is reasonable, considerations will be given to factors such as the proximity of dust-emitting operations to human habitations and/or activities and atmospheric conditions that might affect the movement of particulate matter. Some of the reasonable precautions include, but are not limited to, the following:
- Use, where practical, of water or chemicals for control of dust in the demolition of existing buildings or structures, construction operations, the grading of roads, or the clearing of lands.
 - Application, where practical, of asphalt, oil, water, or suitable chemicals to, or covering of, dirt roads, material stockpiles, and other surfaces which can create dust.
 - Installation and use, where practical, of hoods, fans, and fabric filters or equivalent systems to enclose and vent the handling of dusty materials. Adequate containment methods should be employed during sandblasting or other operations.
 - Covering, where practical, of open-bodied trucks transporting materials likely to give rise to airborne dusts.
 - Paving of roadways and their maintenance in a clean condition, where practical.
 - Prompt removal of earth or other stored material from streets, where practical.
- 2.2 The permittee shall monitor and maintain records of the frequency and the method(s) used (i.e., water, chemical dust suppressants, etc.) to reasonably control fugitive emissions.
- 2.3 The permittee shall maintain records of all fugitive dust complaints received. The permittee shall take appropriate corrective action as expeditiously as practicable after receipt of a valid complaint. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.
- 2.4 The permittee shall conduct a quarterly facility-wide inspection of potential sources of fugitive emissions, during daylight hours and under normal operating conditions to ensure that the methods used to reasonably control fugitive emissions are effective. If fugitive emissions are not being reasonably controlled, the permittee shall take corrective action as expeditiously as practicable. The permittee shall maintain records of the results of each quarterly fugitive emissions inspection. The records shall include, at a minimum, the date of each inspection and a description of the following: the permittee's assessment of the conditions existing at the time fugitive emissions were present (If observed), any corrective action taken in response to the fugitive emissions, and the date the corrective action was taken.

Odors

- 2.5 No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

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- 2.6 The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken.

Visible Emissions

- 2.7 The permittee shall not discharge any air pollutant to the atmosphere from any point of emission for a period or periods aggregating more than three minutes in any 60-minute period which is greater than 20% opacity as determined by procedures contained in IDAPA 58.01.01.625. These provisions shall not apply when the presence of uncombined water, NO_x, and/or chlorine gas is the only reason for the failure of the emission to comply with the requirements of this section.
- 2.8 The permittee shall conduct a quarterly facility-wide inspection of potential sources of visible emissions, during daylight hours and under normal operating conditions. The visible emissions inspection shall consist of a see/no see evaluation for each potential source. If any visible emissions are present from any point of emission, the permittee shall either take appropriate corrective action as expeditiously as practicable, or perform a Method 9 opacity test in accordance with the procedures outlined in IDAPA 58.01.01.625. A minimum of 30 observations shall be recorded when conducting the opacity test. If opacity is greater than 20% for a period or periods aggregating more than three minutes in any 60-minute period, the permittee shall take all necessary corrective action and report the exceedance in accordance with IDAPA 58.01.01.130-136. The permittee shall maintain records of the results of each quarterly visible emissions inspection and each opacity test when conducted. The records shall include, at a minimum, the date and results of each inspection and test and a description of the following: the permittee's assessment of the conditions existing at the time visible emissions are present (if observed), any corrective action taken in response to the visible emissions, and the date corrective action was taken.

Excess Emissions

- 2.9 The permittee shall comply with the procedures and requirements of IDAPA 58.01.01.130-136 for excess emissions due to startup, shutdown, scheduled maintenance, safety measures, upsets and breakdowns.

Open Burning

- 2.10 The permittee shall comply with the requirements of the *Rules for Control of Open Burning*, IDAPA 58.01.01.600-616.

Performance Testing

- 2.11 If performance testing (air emissions source test) is required by this permit, the permittee shall provide notice of intent to test to DEQ at least 15 days prior to the scheduled test date or shorter time period as approved by DEQ. DEQ may, at its option, have an observer present at any emissions tests conducted on a source. DEQ requests that such testing not be performed on weekends or state holidays.

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All performance testing shall be conducted in accordance with the procedures in IDAPA 58.01.01.157. Without prior DEQ approval, any alternative testing is conducted solely at the permittee's risk. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the testing does not satisfy the testing requirements. Therefore, at least 30 days prior to conducting any performance test, the permittee is encouraged to submit a performance test protocol to DEQ for approval. The written protocol shall include a description of the test method(s) to be used, an explanation of any unusual circumstances regarding the proposed test, and the proposed test schedule for conducting and reporting the test.

Within 30 days following the date in which a performance test required by this permit is concluded, the permittee shall submit to DEQ a performance test report. The written report shall include a description of the process, identification of the test method(s) used, equipment used, all process operating data collected during the test period, and test results, as well as raw test data and associated documentation, including any approved test protocol.

Monitoring and Recordkeeping

- 2.12 The permittee shall maintain sufficient records to ensure compliance with all of the terms and conditions of this operating permit. Records of monitoring information shall include, but not be limited to the following: (a) the date, place, and times of sampling or measurements; (b) the date analyses were performed; (c) the company or entity that performed the analyses; (d) the analytical techniques or methods used; (e) the results of such analyses; and (f) the operating conditions existing at the time of sampling or measurement. All monitoring records and support information shall be retained for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes, but is not limited to, all calibration and maintenance records and all original strip-chart recordings for continuous monitoring instrumentation and copies of all reports required by this permit. All records required to be maintained by this permit shall be made available in either hard copy or electronic format to DEQ representatives upon request.

Reports and Certifications

- 2.13 Any reporting required by this permit, including, but not limited to, records, monitoring data, supporting information, requests for confidential treatment, notifications of intent to test, testing reports, or compliance certifications, shall contain a certification by a responsible official. The certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the document(s) are true, accurate, and complete. Any reporting required by this permit, with the exception of a Portable Equipment Registration and Relocation form, shall be submitted to the following address:

Air Quality Permit Compliance
Department of Environmental Quality
Pocatello Regional Office
444 Hospital Way, #300
Pocatello, ID 83201
Phone: (208) 236-6160

Fax: (208) 236-6168

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Obligation to Comply

- 2.14 Receiving a Tier II operating permit shall not relieve any owner or operator of the responsibility to comply with all applicable local, state, and federal rules and regulations.

Fuel-burning Equipment

- 2.15 The permittee shall not discharge to the atmosphere from any fuel-burning equipment PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas, 0.050 gr/dscf of effluent gas corrected to 3% oxygen by volume for liquid, 0.050 gr/dscf of effluent gas corrected to 8% oxygen by volume for coal, and 0.080 gr/dscf of effluent gas corrected to 8% oxygen by volume for wood products.

Sulfur Content

- 2.16 No person shall sell, distribute, use, or make available for use any distillate fuel oil containing more than the following percentages of sulfur:
- ASTM Grade 1 fuel oil - 0.3% by weight.
 - ASTM Grade 2 fuel oil - 0.5% by weight.
 - ASTM Grades 4, 5 and 6 fuel oil – 1.75% by weight.
- 2.17 The permittee shall not sell, distribute, use, or make available for use, any coal containing greater than 1% sulfur by weight.
- 2.18 The permittee shall maintain documentation of supplier verification of distillate fuel oil/coal sulfur content on an as-received basis.

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3. BOILER NO. 2

3.1 Process Description

Boiler No. 2 is a 23 MMBtu/hr coal-fired boiler used to supply steam to the facility.

3.2 Emission Control Description

Particulate emissions from Boiler No. 2 are controlled by a baghouse.

Table 3.1 BOILER NO. 2 DESCRIPTION

| Emissions Unit(s) / Process(es) | Emissions Control Device |
|---------------------------------|--------------------------|
| Boiler No. 2 | Baghouse |

Emissions Limits

3.3 Emission Limits

The SO₂ and NO_x emissions from the Boiler No. 2 stack shall not exceed any corresponding emissions rate limits listed in Table 3.2.

Table 3.2 BOILER NO. 2 EMISSIONS LIMITS

| Source Description | SO ₂ | | NO _x | |
|--------------------|-----------------|------|-----------------|------|
| | lb/hr | T/yr | lb/hr | T/yr |
| Boiler No. 2 | 29.9 | 51.6 | 32.6 | 56.2 |

3.4 Particulate Emissions Limits

PM emissions from the Boiler No. 2 stack shall not exceed 0.100 grains per dry standard cubic foot (corrected to 8% oxygen) when burning coal as required in IDAPA 58.01.01.677. PM emissions from the Boiler No. 2 stack shall not exceed 0.015 grains per dry standard cubic foot (corrected to 3% oxygen) when burning gas as required in IDAPA 58.01.01.677.

3.5 Opacity

Visible emissions from the common stack (Boiler No. 1 and Boiler No. 2 exhaust through the same stack) shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as determined by procedures contained in IDAPA 58.01.01.625.

Operating Requirements

3.6 Coal Sulfur Content

Coal burned shall not contain sulfur in exceedance of 0.9% by weight.

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3.7 **Coal Throughput Limit**

Boiler No. 2 shall burn no more than 3,854 tons of coal per any consecutive 12-month period.

3.8 **Hourly Steam Production Limit, Coal**

Boiler No. 2 shall produce no more than 23,000 pounds of steam per hour when burning coal.

3.9 **Natural Gas Throughput Limit**

Boiler No. 2 shall burn no more than 32.5 million standard cubic feet of natural gas per any consecutive 12-month period.

3.10 **Baghouse Operating Requirement**

The permittee shall use a baghouse to control PM₁₀ emissions from Boiler No. 2 when burning coal.

3.11 **Baghouse Pressure Drop**

The permittee shall install, operate, and maintain a device to measure the pressure drop across the baghouse. The pressure drop shall be maintained within manufacturer's and Operation and Maintenance (O&M) Manual specifications. Documentation of the operating pressure drop specifications for the baghouse shall remain onsite at all times and shall be made available to DEQ representatives upon request.

3.12 **Operations and Maintenance Manual Requirements**

Within 60 days after startup, the permittee shall have developed an O&M manual for the baghouse on Boiler No. 2, which describes the procedures that will be followed to comply with General Provision 2 and the manufacturer specifications for the baghouse. The manual shall include the specification for the acceptable pressure drop range. This manual shall remain onsite at all times and shall be made available to DEQ representatives upon request.

Monitoring and Recordkeeping Requirements

3.13 **Coal Throughput**

The permittee shall monitor and record the amount, in tons, of coal burned by Boiler No. 2 each month and for the most recent 12-month period.

3.14 **Sulfur Content**

The permittee shall monitor, or the supplier shall verify, the maximum sulfur content by weight of the coal each time coal is introduced into the coal storage bunkers. This information shall be recorded each time coal is introduced into the coal storage bunkers.

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3.15 Steam Production Rate

The permittee shall monitor and record the steam production rate, in pounds per hour, of Boiler No. 2.

3.16 Date and Time of Coal Burning

The permittee shall record the date and time for the following in accordance with Permit Condition 3.20:

- DEQ notifies ISU that a burn ban has been initiated,
- Boiler No. 2 stops burning coal after received the notification,
- DEQ notifies ISU is able to switch back to coal,
- ISU resumes burning coal after the notification is received.

3.17 Natural Gas Throughput

The permittee shall monitor and record the amount, in million standard cubic feet, of natural gas burned by Boiler No. 2 each month and for the most recent 12-month period.

3.18 Pressure Drop Monitoring

The permittee shall monitor and record the pressure drop across the baghouse once per week, when operating.

Reporting Requirements

3.19 Monthly Reports

- 3.19.1 The permittee shall record, in a monthly report, the information required to be monitored and recorded by Permit Conditions 3.13 and 3.14.
- 3.19.2 The permittee shall maintain a monthly report containing the information required to be monitored and recorded by Permit Conditions 3.15 and 3.16 of this permit.
- 3.19.3 The reports required by Permit Conditions 3.19.1 and 3.19.2 shall be maintained on file by the permittee for the most recent five year period and made available to DEQ representatives upon request.

3.20 Air Pollution Episode

If PM₁₀ reaches 70 µg/m³ or greater for a 24 hour average DEQ will notify the ISU boiler room [weekdays 282-2209 or weekends 282-2696], that a burn ban has been initiated, and ISU shall switch from burning coal to natural gas within two hours of receiving the call. When 24-hour average falls below 70 µg/m³, DEQ will again notify the ISU boiler room when they are able to switch back to coal.

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4. PATHOLOGICAL WASTE INCINERATOR

4.1 Process Description

The purpose of the incinerator is to incinerate preserved animal tissue and cadavers which were used for educational purposes. The incinerator is designed as a two-stage system with a primary combustion chamber and a secondary combustion chamber.

4.2 Emission Control Description

Emissions are controlled by the secondary combustion chamber.

Emissions Limits

4.3 Particulate Emission Limit

No person shall allow, suffer, cause or permit any incinerator to discharge more than 0.2 pounds of particulates per 100 pounds of refuse burned.

[PTC Condition]

4.4 Opacity Limit

Emissions from the incinerator stack, or any other stack, vent, or functionally equivalent opening associated with the incinerator, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

[PTC Condition]

4.5 Control of Odors

No person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids to the atmosphere in such quantities as to cause air pollution.

[PTC Condition]

Operating Requirements

4.6 Material Incinerated

The incinerator shall be used to incinerate pathological waste only. Pathological waste is defined as waste material consisting of only human or animal remains, anatomical parts, and/or tissue, the bags/containers used to collect and transport the waste material and animal bedding (if applicable).

[PTC Condition]

4.7 Throughput Limits

The maximum throughput of the incinerator shall not exceed 500 pounds per batch or 75 tons per any consecutive 12-month period. The average burn rate shall not exceed 100 pounds per hour per batch.

[PTC Condition]

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4.8 Continuous Temperature Monitor

A continuous temperature monitoring and recording device shall be operated for the secondary combustion chamber. A compilation of the most recent five years of temperature records shall be kept on site and shall be made available to DEQ representatives upon request.

[PTC Condition]

4.9 Secondary Chamber Operating Temperature

The secondary combustion chamber shall operate at an average hourly temperature of at least 1600°F for the combustion cycle and for at least ½ hour after the end of the combustion cycle.

[PTC Condition]

Monitoring and Recordkeeping Requirements

4.10 Throughput

The permittee shall record the amount, in pounds, and type of material charged into the incinerator for each batch incinerated. The permittee shall record the time that each batch was charged into the incinerator and the period of time set for the combustion cycle. The permittee shall calculate the average amount of material burned per hour for each batch using the combustion cycle time and the total weight of material burned per batch. Each month, the permittee shall compile the records of the amount of material charged into a rolling sum for the most recent 12-month period. A compilation of the most recent five years of records shall be kept on site and shall be made available to DEQ representatives upon request.

[PTC Condition]

4.11 Odor Complaints

The permittee shall maintain records of all odor complaints received. If the complaint has merit, the permittee shall take appropriate corrective action as expeditiously as practicable. The records shall include, at a minimum, the date that each complaint was received and a description of the following: the complaint, the permittee's assessment of the validity of the complaint, any corrective action taken, and the date the corrective action was taken. A compilation of the most recent five years of records shall be kept onsite and shall be made available to DEQ representatives upon request.

[PTC Condition]

4.12 Operations and Maintenance Manual Requirements

Within 60 days after January 13, 2004, the permittee shall have developed and submitted to DEQ an Operation and Maintenance (O&M) manual for the incinerator. The manual shall describe the procedures that will be followed to comply with the manufacturer specifications. A copy of this manual shall remain onsite at all times. A copy of this manual shall also be submitted to the DEQ regional office at the following address:

Air Quality Permit Compliance
Department of Environmental Quality
Pocatello Regional Office
444 Hospital Way, #300
Pocatello, ID 83201

[PTC Condition]

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5. BOILER NO. 1 AND BOILER NO. 3

5.1 Process Description

Boiler No. 1 is used only as a backup or standby boiler for steam generation. It shares a common stack with Boiler No. 2, is fired on natural gas, and is rated at 32.05 MMBtu/hr. Boiler No. 3 is used for steam generation, is fired on natural gas, and is rated at 26.92 MMBtu/hr.

5.2 Emission Control Description

The emissions from the boilers are uncontrolled. Although Boiler No. 1 and No. 2 share the same stack, the baghouse that controls particulate emissions from Boiler No. 2 does not control emissions from Boiler No. 1.

Emissions Limits

5.3 Particulate Emissions Limits

PM emissions from the Boiler No. 1 stack or the Boiler No. 3 stack shall not exceed 0.015 grains per dry standard cubic foot (corrected to 3% oxygen) when burning gas as required in IDAPA 58.01.01.677.

5.4 Opacity

Emissions from the common stack (Boiler No. 1 and No. 2) or from Boiler No. 3, or any other stack, vent, or functionally equivalent opening associated with the Boilers No. 1, 2, or 3, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

Operating Requirements

5.5 Natural Gas Throughput Limit

Boiler No. 1 shall burn no more than 75.4 million standard cubic feet of natural gas per any consecutive 12-month period.

Boiler No. 3 shall burn no more than 173 million standard cubic feet of natural gas per any consecutive 12-month period.

Monitoring and Recordkeeping Requirements

5.6 Natural Gas Throughput

The permittee shall monitor and record the amount, in million standard cubic feet, of natural gas burned by Boiler No. 1 and Boiler No. 3, individually, each month and for the most recent 12-month period.

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6. BOILER NO. 4**6.1 Process Description**

Boiler No. 4 is used to heat the Rendezvous building on the Idaho State University campus and is fired on natural gas.

[PTC Condition]

6.2 Emissions Control Description

Table 6.1 BOILER DESCRIPTION

| Emissions Unit(s) / Process(es) | Emissions Control Device |
|-------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|
| Boiler No. 4 Manufacturer: Keystone Model: Victory Rating: 60,000 lb steam/hr - 72.84 MMBtu/hr Fuel: Natural gas | Coen low-NO _x burner |

Emissions Limits**6.3 Emissions Limits**

The carbon monoxide (CO) emissions from the Boiler No. 4 stack shall not exceed 7.2 pounds per hour (lb/hr).

[PTC Condition]

6.4 Grain Loading Limit

The permittee shall not discharge to the atmosphere from the Boiler No. 4 stack PM in excess of 0.015 gr/dscf of effluent gas corrected to 3% oxygen by volume for gas in accordance with IDAPA 58.01.01.676.

[PTC Condition]

6.5 Opacity Limit

Emissions from the Boiler No. 4 stack, or any other stack, vent, or functionally equivalent opening associated with Boiler No. 4, shall not exceed 20% opacity for a period or periods aggregating more than three minutes in any 60-minute period as required by IDAPA 58.01.01.625. Opacity shall be determined by the procedures contained in IDAPA 58.01.01.625.

[PTC Condition]

Operating Requirements**6.6 Throughput Limits**

The amount of natural gas used by Boiler No. 4 shall not exceed 468 million standard cubic feet (MMscf) per any consecutive 12-month period.

[PTC Condition]

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6.7 Fuel Type

Boiler No. 4 shall be fueled on natural gas exclusively.

[PTC Condition]

Monitoring and Recordkeeping Requirements

6.8 Throughput Monitoring

The permittee shall monitor and record the amount of natural gas combusted in Boiler No. 4 as specified in 40 CFR 60.48.c(g). In addition, the permittee shall monitor and record the amount of natural gas combusted in Boiler No. 4 each month and for the most recent 12-month period. Records of this information shall remain on site for the most recent two-year period and shall be made available to DEQ representatives upon request.

[PTC Condition]

6.9 Performance Test

The permittee shall conduct a performance test to measure CO emissions from Boiler No. 4 within 180 days of commencement of operation of the boiler. The performance testing will be conducted to demonstrate compliance with the emission rate limit listed in Permit Condition 6.3.

The performance test shall be performed in accordance with IDAPA 58.01.01.157. The fuel type and amount to Boiler No. 4 and the steam production in pounds per hour (lb/hr) shall be recorded during the performance test.

[PTC Condition]

6.10 Compliance Test Protocol

The permittee is strongly encouraged to submit a test protocol to DEQ for approval at least 30 days prior to the compliance test required in Permit Condition 6.9. If the permittee fails to obtain prior written approval by DEQ for any testing deviations, DEQ may determine that the test does not satisfy the testing requirements.

[PTC Condition]

6.11 Compliance Test Report

The permittee shall submit a report of the results of the compliance test required in Permit Condition 6.9, including all required process data, to DEQ within 30 days after the date on which the stack sampling is concluded.

[PTC Condition]

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6.12 Address

Any correspondence to the EPA shall be sent to:

US EPA
Region 10
1200 Sixth Avenue
Seattle, WA 98101

Any correspondence to the DEQ shall be sent to:

Idaho Department of Environmental Quality
Pocatello Regional Office
444 Hospital Way #300
Pocatello, ID 83204

[PTC Condition]

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7. SUMMARY OF EMISSION RATE LIMITS

Table 7.1 provides a summary of all emission rate limits required by this permit.

Table 7.1 SUMMARY OF EMISSION RATE LIMITS

| Idaho State University, Pocatello Emission Limits ^a – Hourly (lb/hr) and Annual ^b (T/yr) | | | | | |
|-------------------------------------------------------------------------------------------------------------------|-----------------|------|-----------------|------|-------|
| Source Description | NO _x | | SO ₂ | | CO |
| | lb/hr | T/yr | lb/hr | T/yr | lb/hr |
| Boiler No. 2 | 32.6 | 56.2 | 29.9 | 51.6 | --- |
| Boiler No. 4 | --- | --- | --- | --- | 7.2 |

^a As determined by a pollutant-specific EPA reference method, a DEQ-approved alternative, or as determined by DEQ's emissions estimation methods used in this permit analysis.

^b As determined by multiplying the actual or allowable (if actual is not available) pound per hour emission rate by the allowable hours per year that the process(es) may operate(s), or by actual annual production rates.

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8. TIER II PERMIT GENERAL PROVISIONS

1. The permittee has a continuing duty to comply with all terms and conditions of this permit. All emissions authorized herein shall be consistent with the terms and conditions of this permit. The emission of any pollutant in excess of the limitations specified herein, or noncompliance with any other condition or limitation contained in this permit, shall constitute a violation of this permit and the *Rules for the Control of Air Pollution in Idaho*, and the Environmental Protection and Health Act, Idaho Code 39-101 et seq.
2. The permittee shall at all times (except as provided in the *Rules for the Control of Air Pollution in Idaho*) maintain and operate in good working order all treatment or control facilities or systems installed or used to achieve compliance with the terms and conditions of this permit and other applicable laws for the control of air pollution.
3. The permittee shall allow the director, and/or his authorized representative(s), upon the presentation of credentials:
 - To enter upon the permittee's premises where an emissions source is located, or in which any records are required to be kept under the terms and conditions of this permit.
 - At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit, to inspect any monitoring methods required in this permit, and require stack compliance testing in conformance with IDAPA 58.01.01.157 when deemed appropriate by the Director.
4. Nothing in this permit is intended to relieve or exempt the permittee from compliance with any applicable federal, state, or local law or regulation, except as specifically provided herein.
5. In the event of any change in control or ownership of source(s) covered by this permit, the permittee and succeeding owner or controller shall notify the Director of the change in ownership. Any proposed change(s) or modification(s) to this permit by the succeeding owner or controller shall be requested in accordance with the *Rules for the Control of Air Pollution in Idaho*.
6. This permit shall be renewable on the expiration date, provided the permittee submits any and all information necessary for the director to determine the amount and type of air pollutants emitted from the equipment for which this permit is granted. Failure to submit such information within 60 days after receipt of the Director's request shall cause the permit to become void.
7. The Director may require the permittee to develop a list of operation and maintenance procedures to be submitted to DEQ. Such list of procedures shall become a part of this permit by reference, and the permittee shall adhere to all of the operation and maintenance procedures contained therein.
8. The provisions of this permit are severable, and if any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.